

CLAIMS

Claims 17-41 (canceled).

42. An ultra-wideband communications device comprising:

a transceiver, the transceiver configured to transmit and receive ultra-wideband signals according to a medium access control protocol, the protocol having a first time period and a second time period, the first time period employing a random access protocol and the second time period employing a Time Division Multiple Access protocol.

43. The ultra-wideband communications device of claim 42, wherein the random access protocol comprises a carrier sensing protocol.

44. The ultra-wideband communications device of claim 42, wherein the transceiver is configured to transmit and receive at a plurality of data rates.

45. The ultra-wide-band communications device of claim 42, wherein the transceiver is configured to receive the ultra-wideband signals from a wireless medium.

46. The ultra wide-band communications device of claim 42, wherein the transceiver is configured to transmit and receive a synchronization signal, the synchronization signal used to communicate clock synchronization with another device.

47. The ultra-wideband communications device of claim 42, wherein the transceiver further comprises a physical layer, the physical layer comprising a receive gain control circuit.

48. The ultra-wideband communications device of claim 42, wherein the device further comprises a framing control unit, the framing control unit defining Time Division Multiple Access frames, the frames comprising a start of frame section and at least one data slot.

49. The ultra-wideband communications device of claim 48, wherein the at least one data slot has a variable length.

50. The ultra-wideband communications device of claim 42, wherein the transceiver is configured to define the start and duration of the first time period.

51. The ultra-wideband communications device of claim 42, wherein the transceiver is configured to transmit and receive data asynchronously.

52. The ultra-wideband communications device of claim 42, wherein the transceiver is configured to transmit and receive data isochronously.

53. An ultra-wideband communications device comprising:

a transceiver, the transceiver configured to transmit and receive ultra-wideband signals according to a medium access control protocol, the protocol including a random access period and a Time Division Multiple Access period, the transceiver further configured to transmit data in the Time Division Multiple Access period.

54. The ultra-wideband communications device of claim 53, wherein the transceiver is configured to transmit and receive data at a plurality of data rates.

55. The ultra-wideband communications device of claim 53, wherein the transceiver is configured to transmit ultra-wideband signals in a wireless medium.

56. The ultra-wideband communications device of claim 53, wherein the transceiver is configured to transmit and receive a synchronization signal, the synchronization signal used to communicate clock synchronization with another device.

57. The ultra-wideband communications device of claim 53, wherein the transceiver further comprises a physical layer, the physical layer comprising a receive gain control circuit.

58. The ultra-wideband communications device of claim 53, wherein the transceiver is configured to transmit and receive data isochronously.

59. The ultra-wideband communications device of claim 53, wherein the device further comprises a framing control unit, the framing control unit defining Time Division Multiple Access frames, the frames comprising a start of frame section and at least one data slot.

60. The ultra-wideband communications device of claim 59, wherein the at least one data slot has a variable length.